



29387  
Pennsylvania Department of Environmental Protection

400 Waterfront Drive  
Pittsburgh, PA 15222-4745

April 25, 1997

**Southwest Regional Office**

Paul J. Gotthold, Chief  
Pennsylvania Operations Branch (3HW80)  
U. S. EPA Region III  
841 Chestnut Building  
Philadelphia, PA 19107

RECEIVED  
412-442-1000  
PA/OC SECTION

MAY 1 1997

EPA REGION III

RE: Calgon Carbon Corporation  
Hazardous Waste Management  
Permit Modification  
I.D. No. PAD000736942  
Neville Township  
Allegheny County

Dear Mr. Gotthold:

I have enclosed for your review a copy of a hazardous waste permit modification request for Calgon Carbon Corporation's Neville Island facility. The request is to include ongoing hazardous waste thermal treatment and residual waste processing activities under existing Hazardous Waste Permit No. PAD000736942. The Department's review of this application will be in conformance with the Governor's Executive Order 1995-5 (application fee Money Back Guarantee) as modified by the Department, effective July 1, 1996.

This permit modification addresses the thermal treatment of hazardous waste (spent activated carbon) in a non-hazardous waste incineration unit. Please advise the Department within sixty (60) days if EPA has to prepare a Federal hazardous waste management permit under RCRA for the thermal treatment of hazardous waste at Calgon so that we may prepare for joint technical evaluation and permit decision making in this matter. Please note that we understand that the matter of solid waste management unit corrective action under RCRA for this site has not been decided. Therefore, please advise if EPA intends to make a permit decision to address the need (if any) for corrective action as well as the Federal requirements for land disposal restrictions and air emissions from hazardous waste management units under 40 CFR Chapter 264 jointly with any Department permit decision on hazardous waste thermal treatment and residual waste processing. Of course, if EPA has any comments or recommendations on this application or on how Calgon should be regulated, please advise.



Paul J. Gotthold, Chief

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RECEIVED  
PROC. SECTION

APR 25 1997

EPA REGION III April 25, 1997

Please be advised that air quality permitting for Calgon falls under the purview of the Allegheny County Health Department. We will be supplying the county health department with a copy of this application for their evaluation and comment.

If you have any questions on this letter or on the status of the Calgon permit modification request evaluation, please contact Carl Spadaro.

Sincerely,



Michael G. Forbeck, P.E.  
Facilities Manager  
Waste Management

Enclosure



P.O. BOX 717 • PITTSBURGH, PA 15230 • (412) 787-6700

Ph: (412) 787-6803

Fax: (412) 787-6682

April 22, 1997

**VIA EXPRESS MAIL**

Mr. Carl Spadaro  
Facilities Engineer  
Southwest Region - Field Operations  
PA Department of Environmental Protection  
Bureau of Solid Waste Management  
400 Waterfront Drive  
Pittsburgh, PA 15222-4745

**RECEIVED**

APR 23 1997

DEP, Southwest Region  
Bureau of Waste Management

RE: **RCRA Permit Modification to Incorporate Thermal Treatment  
Calgon Carbon Corporation - Neville Island Plant. PAD 000736942**

Dear Mr. Spadaro:

Per your guidance, Calgon Carbon Corporation has prepared proposed revisions to the RCRA Part B Permit for the Neville Island facility to incorporate thermal treatment operations. The following affected sections have been modified, and are enclosed (two copies) for your review:

- |   |  |
|---|--|
| 1. <u>Part A Modification</u>                 | Facility Description                   |
| 2. <u>Section B</u>                           | Operational Concept Report             |
| 3. <u>Exhibit B-4</u>                         | Main Text                              |
| 4. <u>Waste Analysis Plan</u>                 | Waste Listing                          |
| 5. <u>WAP Appendix B</u>                      | Process Information/Storage            |
| 6. <u>Section D</u>                           | Process Information/Thermal Treatment  |
| 7. <u>Section E</u>                           | Thermal Treatment/Associated Abatement |
| 8. <u>Diagrams</u>                            | Procedures to Prevent Hazards          |
| 9. <u>Section F</u>                           | Pending, ACHD Article XXI              |
| 10. <u>Air Permit Application</u>             |  |
| 11. <u>Closure Plan</u>                       |  |
| 12. <u>Siting Criteria</u>                    |  |
| 13. <u>Notifications</u>                      | Neville Township, Allegheny County     |
| 14. <u>Contingency Plan</u>                   |  |
| 15. <u>Pollution Incident Prevention Plan</u> |  |
| 16. <u>Emergency Manual</u>                   |  |

Mr. Carl Spadaro  
April 22, 1997  
Page 2

As discussed in previous conversations, changes were made to the Part A and Waste Analysis Plan (WAP) waste code listings to correct discrepancies in the inclusion of numerous waste codes. Codes that were previously included in the Part A listing and added to the WAP listing are indicated by italicized print in the revised Waste Analysis Plan. Additionally, Calgon Carbon Corporation is requesting the addition of the following waste codes to both the Part A and WAP listings: K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151. These codes are identified by boldface print in the revised Waste Analysis Plan. A permit modification for inclusion of these waste codes is being requested under separate review and comment from the thermal treatment modification to promote expediency in the approval process.

Note that the sections associated with the August 29, 1996 proposed permit revision to incorporate management of residual wastes have been further revised to include modifications associated with thermal treatment operations, and are included in this submittal. Accordingly, separate review and approval of the August 29 submittal should not be necessary.

If I can provide any additional information in support of this submittal, or if I can answer any questions, please contact me at (412) 787-6803.

Sincerely,

CALGON CARBON CORPORATION



Jeffrey M. McKinney  
Environmental Engineer  
Facilities Engineering

Enclosures

**Part A**  
**Modification**

**RECEIVED**

APR 23 1997

DEP, Southwest Region  
Bureau of Waste Management

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**CALGON CARBON CORPORATION**

**Neville Island Plant  
Pittsburgh, PA**

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**RCRA Part B Permit Modification for  
Incorporation of Thermal Treatment  
Operation**

**April 1997**

**PA DEP Copy 1**

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

<b>For EPA Regional Use Only</b>  <div style="border: 1px solid black; height: 40px; margin-bottom: 5px;"></div> <b>Date Received</b> Month    Day    Year <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>	<h1 style="margin: 0;">EPA</h1> <p>United States Environmental Protection Agency Washington, DC 20460</p> <h2 style="margin: 0;">Hazardous Waste Permit</h2> <h3 style="margin: 0;">Application</h3> <h3 style="margin: 0;">Part A</h3> <p><i>(Read the Instructions before starting)</i></p>	<div style="border: 2px solid black; padding: 5px; font-weight: bold; font-size: 1.2em;">RECEIVED</div> <p style="font-size: 1.2em; margin-top: 10px;">APR 23 1997</p> <p style="font-size: 0.8em; margin-top: 10px;">DEP, Southwest Region Bureau of Waste Management</p>
<b>I. Installation's EPA ID Number (Mark 'X' in the appropriate box)</b>		
<input type="checkbox"/> <b>A. First Part A Submission</b>		<input checked="" type="checkbox"/> <b>B. Part A Amendment #</b> NA
<b>C. Installation's EPA ID Number</b> PAD000736942		<b>D. Secondary ID Number (If applicable)</b> NA
<b>II. Name of Facility</b> Calgon Carbon Corporation		
<b>III. Facility Location (Physical address not P.O. Box or Route Number)</b>		
<b>A. Street</b> 200 Neville Road Street (Continued)		
<b>City or Town</b> Pittsburgh		<b>State</b> PA
		<b>Zip Code</b> 15225
<b>County Code (If known)</b>	<b>County Name</b> Allegheny	
<b>B. Land Type</b> (Enter code) P	<b>C. Geographic Location</b> LATITUDE (Degrees, Minutes, & Seconds)    LONGITUDE (Degrees, Minutes & Seconds) 40, 29, 02    80, 04, 43	
		<b>D. Facility Existence Date</b> Month    Day    Year 01    01    1940
<b>IV. Facility Mailing Address</b>		
Street or P.O. Box 200 Neville Road City or Town Pittsburgh		
		<b>State</b> PA
		<b>Zip Code</b> 15225
<b>V. Facility Contact (Person to be contacted regarding waste activities at facility)</b>		
<b>Name (Last)</b> Kreminski		<b>(First)</b> Stanley
<b>Job Title</b> Plant Manager		<b>Phone Number (Area Code and Number)</b> (412) 787-6874
<b>VI. Facility Contact Address (See instructions)</b>		
<b>A. Contact Address</b> Location    Mailing    Other <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		<b>B. Street or P.O. Box</b>
<b>City or Town</b>		<b>State</b>
		<b>Zip Code</b>

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

<b>EPA I.D. Number (Enter from page 1)</b>		<b>Secondary ID Number (Enter from page 1)</b>	
PAD000736942		NA	
<b>VII. Operator Information (See Instructions)</b>			
<b>Name of Operator</b>			
Calgon Carbon Corporation			
<b>Street or P.O. Box</b>			
P.O. Box 717			
<b>City or Town</b>		<b>State</b>	<b>ZIP Code</b>
Pittsburgh		PA	15230
<b>Phone Number (Area Code and Number)</b>		<b>B. Operator Type</b>	<b>C. Change of Operator Indicator</b>
(412) 787-6800		P	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
			<b>Date Changed</b> Month Day Year
<b>VIII. Facility Owner (See Instructions)</b>			
<b>A. Name of Facility's Legal Owner</b>			
Calgon Carbon Corporation			
<b>Street or P.O. Box</b>			
P.O. Box 717			
<b>City or Town</b>		<b>State</b>	<b>ZIP Code</b>
Pittsburgh		PA	15230
<b>Phone Number (Area Code and Number)</b>		<b>B. Owner Type</b>	<b>C. Change of Owner Indicator</b>
(412) 787-6800		P	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
			<b>Date Changed</b> Month Day Year
<b>IX. SIC Codes (4-digit, in order of significance)</b>			
<b>Primary</b>		<b>Secondary</b>	
2819	(Description) Activated Carbon		(Description)
<b>Secondary</b>		<b>Secondary</b>	
	(Description)		(Description)
<b>X. Other Environmental Permits (See Instructions)</b>			
<b>A. Permit Type (Enter code)</b>		<b>B. Permit Number</b>	<b>C. Description</b>
N		PAD0091227	NPDES
R		PAD000736942	RCRA
E		Pending	Art. XXI Air Permit, Allegheny Co.
E		1012003 002 81101	Air Source Registration, Alleg. Co.



EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

PAD000736942

NA

**XI. Nature of Business (Provide a brief description)**

Carbonaceous materials are combined with various additives and thermally activated to produce principal products. Spent activated carbons are thermally reactivated, releasing adsorbed materials which are captured and destroyed.

**XII. Process Codes and Design Capacities**

- A. PROCESS CODE** - Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in item XIII.
- B. PROCESS DESIGN CAPACITY** - For each code entered in column A, enter the capacity of the process.
- 1. AMOUNT** - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.
  - 2. UNIT OF MEASURE** - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.
- C. PROCESS TOTAL NUMBER OF UNITS** - Enter the total number of units used with the corresponding process code.

APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY			APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY		
PROCESS CODE	PROCESS		PROCESS CODE	PROCESS	
D79	<u>Disposal:</u> Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day	T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
D80	Landfill	Acre-feet or Hectare-meter	T88	Titanium Dioxide Chloride Process Oxidation Reactor	
D81	Land Treatment	Acres or Hectares	T89	Methane Reforming Furnace	
D82	Ocean Disposal	Gallons Per Day r Liters Per Day	T90	Pulping Liquor Recovery Furnace	
D83	Surface Impoundment	Gallons or Liters	T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
D99	Other Disposal	Any Unit of Measure Listed Below	T92	Halogen Acid Furnaces	
S01	<u>Storage:</u> Container (Barrel, Drum, Etc.)	Gallons or Liters	T93	Other Industrial Furnaces Listed In 40 CFR §260.10	
S02	Tank	Gallons or Liters	T94	Containment Building-Treatment	Cubic Yards or Cubic Meters
S03	Waste Pile	Cubic Yards or Cubic Meters	<u>Miscellaneous (Subpart X):</u>		
S04	Surface Impoundment	Gallons or Liters	X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
S05	Drip Pad	Gallons or Liters	X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; or Kilograms Per Hour
S06	Containment Building-Storage	Cubic Yards or Cubic Meters	X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
S99	Other Storage	Any Unit of Measure Listed Below	X04	Geologic Repository	Cubic Yards or Cubic Meters
T01	<u>Treatment:</u> Tank	Gallons Per Day or Liters Per Day	X99	Other Subpart X	Any Unit of Measure Listed Below
T02	Surface Impoundment	Gallons Per Day or Liters Per Day			
T03	Inclinator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; or Btu's Per Hour			
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T80	Boiler	Gallons or Liters			
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T82	Lime Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T84	Phosphate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T85	Coke Oven	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			
T86	Blast Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour			

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons.....	G	Short Tons Per Hour.....	D	Cubic Yards.....	Y
Gallons Per Hour.....	E	Metric Tons Per Hour.....	W	Cubic Meters.....	C
Gallons Per Day.....	U	Short Tons Per Day.....	N	Acres.....	B
Liters.....	L	Metric Tons Per Day.....	S	Acre-feet.....	A
Liters Per Hour.....	H	Pounds Per Hour.....	J	Hectares.....	Q
Liters Per Day.....	V	Kilograms Per Hour.....	R	Hectare-meter.....	F
				Btu's Per Hour.....	I

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

PAD000736942

NA

## XII. Process Codes and Design Capabilities (Continued)

**EXAMPLE FOR COMPLETING ITEM XII (Shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.**

Line Number	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY		C. Process Total Number Of Units	For Official Use Only
		1. Amount (Specify)	2. Unit Of Measure (Enter code)		
X 1	S 0 2	533.788	G	001	
1	S 0 1	13,640.	G	NA	
2	S 0 2	120,000.	G	004	
3		.			
4		.			
5		.			
6		.			
7		.			
8		.			
9		.			
10		.			
11		.			
12		.			
13		.			

**NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in item XIII.**

## XIII. Other Processes (Follow instructions from item XII for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in seg w/XII)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY		C. Process Total Number Of Units	D. Description Of Process
		1. Amount (Specify)	2. Unit Of Measure (Enter code)		
X 1	T 0 4	.			<b>In-situ Vitrification</b>
1	T 0 4	4,167.	J	001	Thermal treatment for reactivation of spent activated carbon.
2		.			
3		.			
4		.			

<b>EPA I.D. Number (Enter from page 1)</b>	<b>Secondary ID Number (Enter from page 1)</b>
PAD000736942	NA

**XIV. Description of Hazardous Wastes**

**A. EPA HAZARDOUS WASTE NUMBER** - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

**B. ESTIMATED ANNUAL QUANTITY** - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

**C. UNIT OF MEASURE** - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

**D. PROCESSES**

**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

**NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:**

- Enter the first two as described above.
- Enter "000" in the extreme right box of item XIV-D(1).
- Enter in the space provided on page 7, item XIV-E, the line number and the additional code(s).

**2. PROCESS DESCRIPTION:** If a code is not listed for a process that will be used, describe the process in the space provided on the form (D.(2)).

**NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER** - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
- Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

**EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below)** - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESS									
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
X 1	K	0	5	4	900	P	T	0	3	D	8	0				
X 2	D	0	0	2	400	P	T	0	3	D	8	0				
X 3	D	0	0	1	100	P	T	0	3	D	8	0				
X 4	D	0	0	2												Included With Above

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (Enter from page 1)										Secondary ID Number (Enter from page 1)									
PAD000736942										NA									
XIV. Description of Hazardous Wastes (Continued)																			
Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES												
							(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))				
1	D	0	0	4	10	T	S	0	1	S	0	2	T	0	4				
2	D	0	0	5	10	T	S	0	1	S	0	2	T	0	4				
3	D	0	0	6	10	T	S	0	1	S	0	2	T	0	4				
4	D	0	0	7	10	T	S	0	1	S	0	2	T	0	4				
5	D	0	0	8	10	T	S	0	1	S	0	2	T	0	4				
6	D	0	0	9	10	T	S	0	1	S	0	2	T	0	4				
7	D	0	1	0	10	T	S	0	1	S	0	2	T	0	4				
8	D	0	1	1	10	T	S	0	1	S	0	2	T	0	4				
9	D	0	1	2	10	T	S	0	1	S	0	2	T	0	4				
10	D	0	1	3	10	T	S	0	1	S	0	2	T	0	4				
11	D	0	1	4	10	T	S	0	1	S	0	2	T	0	4				
12	D	0	1	5	10	T	S	0	1	S	0	2	T	0	4				
13	D	0	1	6	10	T	S	0	1	S	0	2	T	0	4				
14	D	0	1	7	10	T	S	0	1	S	0	2	T	0	4				
15	D	0	1	8	300	T	S	0	1	S	0	2	T	0	4				
16	D	0	1	9	10	T	S	0	1	S	0	2	T	0	4				
17	D	0	2	0	10	T	S	0	1	S	0	2	T	0	4				
18	D	0	2	1	20	T	S	0	1	S	0	2	T	0	4				
19	D	0	2	2	10	T	S	0	1	S	0	2	T	0	4				
20	D	0	2	3	10	T	S	0	1	S	0	2	T	0	4				
21	D	0	2	4	10	T	S	0	1	S	0	2	T	0	4				
22	D	0	2	5	10	T	S	0	1	S	0	2	T	0	4				
23	D	0	2	6	10	T	S	0	1	S	0	2	T	0	4				
24	D	0	2	7	10	T	S	0	1	S	0	2	T	0	4				
25	D	0	2	8	40	T	S	0	1	S	0	2	T	0	4				
26	D	0	2	9	10	T	S	0	1	S	0	2	T	0	4				
27	D	0	3	0	20	T	S	0	1	S	0	2	T	0	4				
28	D	0	3	1	10	T	S	0	1	S	0	2	T	0	4				
29	D	0	3	2	10	T	S	0	1	S	0	2	T	0	4				
30	D	0	3	3	10	T	S	0	1	S	0	2	T	0	4				
31	D	0	3	4	10	T	S	0	1	S	0	2	T	0	4				
32	D	0	3	5	10	T	S	0	1	S	0	2	T	0	4				
33	D	0	3	6	10	T	S	0	1	S	0	2	T	0	4				

STF ENV580F.6

EPA Form 8700-23 (Rev. 11-30-93) Previous edition is obsolete. -6 of 7- STF ENV580F.6

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

PAD000736942

NA

## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
							(1) PROCESS CODES (Enter code)								
61	K	0	0	1	40	T	S	0	1	S	0	2	T	0	4
62	K	0	0	2	10	T	S	0	1	S	0	2	T	0	4
63	K	0	0	3	10	T	S	0	1	S	0	2	T	0	4
64	K	0	0	4	10	T	S	0	1	S	0	2	T	0	4
65	K	0	0	5	10	T	S	0	1	S	0	2	T	0	4
66	K	0	0	6	10	T	S	0	1	S	0	2	T	0	4
67	K	0	0	7	10	T	S	0	1	S	0	2	T	0	4
68	K	0	0	8	10	T	S	0	1	S	0	2	T	0	4
69	K	0	0	9	10	T	S	0	1	S	0	2	T	0	4
70	K	0	1	0	10	T	S	0	1	S	0	2	T	0	4
71	K	0	1	1	10	T	S	0	1	S	0	2	T	0	4
72	K	0	1	3	10	T	S	0	1	S	0	2	T	0	4
73	K	0	1	4	10	T	S	0	1	S	0	2	T	0	4
74	K	0	1	5	10	T	S	0	1	S	0	2	T	0	4
75	K	0	1	6	10	T	S	0	1	S	0	2	T	0	4
76	K	0	1	7	10	T	S	0	1	S	0	2	T	0	4
77	K	0	1	8	10	T	S	0	1	S	0	2	T	0	4
78	K	0	1	9	10	T	S	0	1	S	0	2	T	0	4
79	K	0	2	0	10	T	S	0	1	S	0	2	T	0	4
80	K	0	2	1	10	T	S	0	1	S	0	2	T	0	4
81	K	0	2	2	10	T	S	0	1	S	0	2	T	0	4
82	K	0	2	3	10	T	S	0	1	S	0	2	T	0	4
83	K	0	2	4	10	T	S	0	1	S	0	2	T	0	4
84	K	0	2	5	10	T	S	0	1	S	0	2	T	0	4
85	K	0	2	6	10	T	S	0	1	S	0	2	T	0	4
86	K	0	2	7	10	T	S	0	1	S	0	2	T	0	4
87	K	0	2	8	10	T	S	0	1	S	0	2	T	0	4
88	K	0	2	9	10	T	S	0	1	S	0	2	T	0	4
89	K	0	3	0	10	T	S	0	1	S	0	2	T	0	4
90	K	0	3	1	10	T	S	0	1	S	0	2	T	0	4
91	K	0	3	2	10	T	S	0	1	S	0	2	T	0	4
92	K	0	3	3	10	T	S	0	1	S	0	2	T	0	4
93	K	0	3	4	10	T	S	0	1	S	0	2	T	0	4



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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES										(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
							(1) PROCESS CODES (Enter code)										
94	K	0	3	5	10	T	S	0	1	S	0	2	T	0	4		
95	K	0	3	6	10	T	S	0	1	S	0	2	T	0	4		
96	K	0	3	7	10	T	S	0	1	S	0	2	T	0	4		
97	K	0	3	8	10	T	S	0	1	S	0	2	T	0	4		
98	K	0	3	9	10	T	S	0	1	S	0	2	T	0	4		
99	K	0	4	0	10	T	S	0	1	S	0	2	T	0	4		
100	K	0	4	1	10	T	S	0	1	S	0	2	T	0	4		
101	K	0	4	2	10	T	S	0	1	S	0	2	T	0	4		
102	K	0	4	3	10	T	S	0	1	S	0	2	T	0	4		
103	K	0	4	4	30	T	S	0	1	S	0	2	T	0	4		
104	K	0	4	5	10	T	S	0	1	S	0	2	T	0	4		
105	K	0	4	6	10	T	S	0	1	S	0	2	T	0	4		
106	K	0	4	7	10	T	S	0	1	S	0	2	T	0	4		
107	K	0	4	8	10	T	S	0	1	S	0	2	T	0	4		
108	K	0	4	9	10	T	S	0	1	S	0	2	T	0	4		
109	K	0	5	0	10	T	S	0	1	S	0	2	T	0	4		
110	K	0	5	1	10	T	S	0	1	S	0	2	T	0	4		
111	K	0	5	2	10	T	S	0	1	S	0	2	T	0	4		
112	K	0	6	0	10	T	S	0	1	S	0	2	T	0	4		
113	K	0	6	1	10	T	S	0	1	S	0	2	T	0	4		
114	K	0	6	2	10	T	S	0	1	S	0	2	T	0	4		
115	K	0	6	4	10	T	S	0	1	S	0	2	T	0	4		
116	K	0	6	5	10	T	S	0	1	S	0	2	T	0	4		
117	K	0	6	6	10	T	S	0	1	S	0	2	T	0	4		
118	K	0	6	9	10	T	S	0	1	S	0	2	T	0	4		
119	K	0	7	1	10	T	S	0	1	S	0	2	T	0	4		
120	K	0	7	3	10	T	S	0	1	S	0	2	T	0	4		
121	K	0	8	3	10	T	S	0	1	S	0	2	T	0	4		
122	K	0	8	4	10	T	S	0	1	S	0	2	T	0	4		
123	K	0	8	5	10	T	S	0	1	S	0	2	T	0	4		
124	K	0	8	6	10	T	S	0	1	S	0	2	T	0	4		
125	K	0	8	7	10	T	S	0	1	S	0	2	T	0	4		
126	K	0	8	8	20	T	S	0	1	S	0	2	T	0	4		



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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES													(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
							(1) PROCESS CODES (Enter code)													
127	K	0	9	0	10	T	S	0	1	S	0	2	T	0	4					
128	K	0	9	1	10	T	S	0	1	S	0	2	T	0	4					
129	K	0	9	3	10	T	S	0	1	S	0	2	T	0	4					
130	K	0	9	4	10	T	S	0	1	S	0	2	T	0	4					
131	K	0	9	5	10	T	S	0	1	S	0	2	T	0	4					
132	K	0	9	6	10	T	S	0	1	S	0	2	T	0	4					
133	K	0	9	7	10	T	S	0	1	S	0	2	T	0	4					
134	K	0	9	8	10	T	S	0	1	S	0	2	T	0	4					
135	K	0	9	9	10	T	S	0	1	S	0	2	T	0	4					
136	K	1	0	0	10	T	S	0	1	S	0	2	T	0	4					
137	K	1	0	1	10	T	S	0	1	S	0	2	T	0	4					
138	K	1	0	2	10	T	S	0	1	S	0	2	T	0	4					
139	K	1	0	3	10	T	S	0	1	S	0	2	T	0	4					
140	K	1	0	4	10	T	S	0	1	S	0	2	T	0	4					
141	K	1	0	5	10	T	S	0	1	S	0	2	T	0	4					
142	K	1	0	6	10	T	S	0	1	S	0	2	T	0	4					
143	K	1	0	7	10	T	S	0	1	S	0	2	T	0	4					
144	K	1	0	8	10	T	S	0	1	S	0	2	T	0	4					
145	K	1	0	9	10	T	S	0	1	S	0	2	T	0	4					
146	K	1	1	0	10	T	S	0	1	S	0	2	T	0	4					
147	K	1	1	1	3700	T	S	0	1	S	0	2	T	0	4					
148	K	1	1	2	20	T	S	0	1	S	0	2	T	0	4					
149	K	1	1	3	10	T	S	0	1	S	0	2	T	0	4					
150	K	1	1	4	10	T	S	0	1	S	0	2	T	0	4					
151	K	1	1	5	10	T	S	0	1	S	0	2	T	0	4					
152	K	1	1	6	10	T	S	0	1	S	0	2	T	0	4					
153	K	1	1	7	10	T	S	0	1	S	0	2	T	0	4					
154	K	1	1	8	10	T	S	0	1	S	0	2	T	0	4					
155	K	1	2	3	10	T	S	0	1	S	0	2	T	0	4					
156	K	1	2	4	10	T	S	0	1	S	0	2	T	0	4					
157	K	1	2	5	10	T	S	0	1	S	0	2	T	0	4					
158	K	1	2	6	10	T	S	0	1	S	0	2	T	0	4					
159	K	1	3	1	10	T	S	0	1	S	0	2	T	0	4					

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Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))											
178	P	0	0	1	10	T	S	0	1	S	0	2	T	0	4			
179	P	0	0	2	10	T	S	0	1	S	0	2	T	0	4			
180	P	0	0	3	10	T	S	0	1	S	0	2	T	0	4			
181	P	0	0	4	10	T	S	0	1	S	0	2	T	0	4			
182	P	0	0	5	10	T	S	0	1	S	0	2	T	0	4			
183	P	0	0	6	10	T	S	0	1	S	0	2	T	0	4			
184	P	0	0	7	10	T	S	0	1	S	0	2	T	0	4			
185	P	0	0	8	10	T	S	0	1	S	0	2	T	0	4			
186	P	0	0	9	10	T	S	0	1	S	0	2	T	0	4			
187	P	0	1	0	10	T	S	0	1	S	0	2	T	0	4			
188	P	0	1	1	10	T	S	0	1	S	0	2	T	0	4			
189	P	0	1	2	10	T	S	0	1	S	0	2	T	0	4			
190	P	0	1	3	10	T	S	0	1	S	0	2	T	0	4			
191	P	0	1	4	180	T	S	0	1	S	0	2	T	0	4			
192	P	0	1	5	10	T	S	0	1	S	0	2	T	0	4			
193	P	0	1	6	10	T	S	0	1	S	0	2	T	0	4			
194	P	0	1	7	10	T	S	0	1	S	0	2	T	0	4			
195	P	0	1	8	10	T	S	0	1	S	0	2	T	0	4			
196	P	0	2	0	10	T	S	0	1	S	0	2	T	0	4			
197	P	0	2	1	10	T	S	0	1	S	0	2	T	0	4			
198	P	0	2	2	10	T	S	0	1	S	0	2	T	0	4			
199	P	0	2	3	10	T	S	0	1	S	0	2	T	0	4			
200	P	0	2	4	10	T	S	0	1	S	0	2	T	0	4			
201	P	0	2	6	10	T	S	0	1	S	0	2	T	0	4			
202	P	0	2	7	10	T	S	0	1	S	0	2	T	0	4			
203	P	0	2	8	10	T	S	0	1	S	0	2	T	0	4			
204	P	0	2	9	10	T	S	0	1	S	0	2	T	0	4			
205	P	0	3	0	10	T	S	0	1	S	0	2	T	0	4			
206	P	0	3	1	10	T	S	0	1	S	0	2	T	0	4			
207	P	0	3	3	10	T	S	0	1	S	0	2	T	0	4			
208	P	0	3	4	10	T	S	0	1	S	0	2	T	0	4			
209	P	0	3	6	10	T	S	0	1	S	0	2	T	0	4			
210	P	0	3	7	10	T	S	0	1	S	0	2	T	0	4			

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES													
							(1) PROCESS CODES (Enter code)													
								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))												
211	P	0	3	8	10	T	S	0	1	S	0	2	T	0	4					
212	P	0	3	9	10	T	S	0	1	S	0	2	T	0	4					
213	P	0	4	0	10	T	S	0	1	S	0	2	T	0	4					
214	P	0	4	1	10	T	S	0	1	S	0	2	T	0	4					
215	P	0	4	2	10	T	S	0	1	S	0	2	T	0	4					
216	P	0	4	3	10	T	S	0	1	S	0	2	T	0	4					
217	P	0	4	4	10	T	S	0	1	S	0	2	T	0	4					
218	P	0	4	5	10	T	S	0	1	S	0	2	T	0	4					
219	P	0	4	6	10	T	S	0	1	S	0	2	T	0	4					
220	P	0	4	7	10	T	S	0	1	S	0	2	T	0	4					
221	P	0	4	8	10	T	S	0	1	S	0	2	T	0	4					
222	P	0	4	9	10	T	S	0	1	S	0	2	T	0	4					
223	P	0	5	0	10	T	S	0	1	S	0	2	T	0	4					
224	P	0	5	1	10	T	S	0	1	S	0	2	T	0	4					
225	P	0	5	4	10	T	S	0	1	S	0	2	T	0	4					
226	P	0	5	6	10	T	S	0	1	S	0	2	T	0	4					
227	P	0	5	7	10	T	S	0	1	S	0	2	T	0	4					
228	P	0	5	8	10	T	S	0	1	S	0	2	T	0	4					
229	P	0	5	9	10	T	S	0	1	S	0	2	T	0	4					
230	P	0	6	0	10	T	S	0	1	S	0	2	T	0	4					
231	P	0	6	2	10	T	S	0	1	S	0	2	T	0	4					
232	P	0	6	3	10	T	S	0	1	S	0	2	T	0	4					
233	P	0	6	4	10	T	S	0	1	S	0	2	T	0	4					
234	P	0	6	5	10	T	S	0	1	S	0	2	T	0	4					
235	P	0	6	6	10	T	S	0	1	S	0	2	T	0	4					
236	P	0	6	7	10	T	S	0	1	S	0	2	T	0	4					
237	P	0	6	8	10	T	S	0	1	S	0	2	T	0	4					
238	P	0	6	9	10	T	S	0	1	S	0	2	T	0	4					
239	P	0	7	0	10	T	S	0	1	S	0	2	T	0	4					
240	P	0	7	1	10	T	S	0	1	S	0	2	T	0	4					
241	P	0	7	2	10	T	S	0	1	S	0	2	T	0	4					
242	P	0	7	3	10	T	S	0	1	S	0	2	T	0	4					
243	P	0	7	4	10	T	S	0	1	S	0	2	T	0	4					

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
							(1) PROCESS CODES (Enter code)								
244	P	0	7	5	10	T	S	0	1	S	0	2	T	0	4
245	P	0	7	6	10	T	S	0	1	S	0	2	T	0	4
246	P	0	7	7	10	T	S	0	1	S	0	2	T	0	4
247	P	0	7	8	10	T	S	0	1	S	0	2	T	0	4
248	P	0	8	1	10	T	S	0	1	S	0	2	T	0	4
249	P	0	8	2	10	T	S	0	1	S	0	2	T	0	4
250	P	0	8	4	10	T	S	0	1	S	0	2	T	0	4
251	P	0	8	5	10	T	S	0	1	S	0	2	T	0	4
252	P	0	8	7	10	T	S	0	1	S	0	2	T	0	4
253	P	0	8	8	10	T	S	0	1	S	0	2	T	0	4
254	P	0	8	9	10	T	S	0	1	S	0	2	T	0	4
255	P	0	9	2	10	T	S	0	1	S	0	2	T	0	4
256	P	0	9	3	10	T	S	0	1	S	0	2	T	0	4
257	P	0	9	4	10	T	S	0	1	S	0	2	T	0	4
258	P	0	9	5	10	T	S	0	1	S	0	2	T	0	4
259	P	0	9	6	10	T	S	0	1	S	0	2	T	0	4
260	P	0	9	7	10	T	S	0	1	S	0	2	T	0	4
261	P	0	9	8	10	T	S	0	1	S	0	2	T	0	4
262	P	0	9	9	10	T	S	0	1	S	0	2	T	0	4
263	P	1	0	1	10	T	S	0	1	S	0	2	T	0	4
264	P	1	0	2	10	T	S	0	1	S	0	2	T	0	4
265	P	1	0	3	10	T	S	0	1	S	0	2	T	0	4
266	P	1	0	4	10	T	S	0	1	S	0	2	T	0	4
267	P	1	0	5	10	T	S	0	1	S	0	2	T	0	4
268	P	1	0	6	10	T	S	0	1	S	0	2	T	0	4
269	P	1	0	7	10	T	S	0	1	S	0	2	T	0	4
270	P	1	0	8	10	T	S	0	1	S	0	2	T	0	4
271	P	1	0	9	10	T	S	0	1	S	0	2	T	0	4
272	P	1	1	0	10	T	S	0	1	S	0	2	T	0	4
273	P	1	1	1	10	T	S	0	1	S	0	2	T	0	4
274	P	1	1	2	10	T	S	0	1	S	0	2	T	0	4
275	P	1	1	3	10	T	S	0	1	S	0	2	T	0	4
276	P	1	1	4	10	T	S	0	1	S	0	2	T	0	4

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## XIV. Description of Hazardous Wastes (Continued)

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				(1) PROCESS CODES (Enter code)				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))					
303	U 0 0 1	10	T	S	0	1	S	0	2	T	0	4	
304	U 0 0 2	10	T	S	0	1	S	0	2	T	0	4	
305	U 0 0 3	10	T	S	0	1	S	0	2	T	0	4	
306	U 0 0 4	10	T	S	0	1	S	0	2	T	0	4	
307	U 0 0 5	10	T	S	0	1	S	0	2	T	0	4	
308	U 0 0 6	10	T	S	0	1	S	0	2	T	0	4	
309	U 0 0 7	10	T	S	0	1	S	0	2	T	0	4	
310	U 0 0 8	10	T	S	0	1	S	0	2	T	0	4	
311	U 0 0 9	10	T	S	0	1	S	0	2	T	0	4	
312	U 0 1 0	10	T	S	0	1	S	0	2	T	0	4	
313	U 0 1 1	10	T	S	0	1	S	0	2	T	0	4	
314	U 0 1 2	10	T	S	0	1	S	0	2	T	0	4	
315	U 0 1 4	10	T	S	0	1	S	0	2	T	0	4	
316	U 0 1 5	10	T	S	0	1	S	0	2	T	0	4	
317	U 0 1 6	10	T	S	0	1	S	0	2	T	0	4	
318	U 0 1 7	10	T	S	0	1	S	0	2	T	0	4	
319	U 0 1 8	10	T	S	0	1	S	0	2	T	0	4	
320	U 0 1 9	10	T	S	0	1	S	0	2	T	0	4	
321	U 0 2 0	10	T	S	0	1	S	0	2	T	0	4	
322	U 0 2 1	10	T	S	0	1	S	0	2	T	0	4	
323	U 0 2 2	10	T	S	0	1	S	0	2	T	0	4	
324	U 0 2 3	10	T	S	0	1	S	0	2	T	0	4	
325	U 0 2 4	10	T	S	0	1	S	0	2	T	0	4	
326	U 0 2 5	10	T	S	0	1	S	0	2	T	0	4	
327	U 0 2 6	10	T	S	0	1	S	0	2	T	0	4	
328	U 0 2 7	10	T	S	0	1	S	0	2	T	0	4	
329	U 0 2 8	10	T	S	0	1	S	0	2	T	0	4	
330	U 0 2 9	10	T	S	0	1	S	0	2	T	0	4	
331	U 0 3 0	10	T	S	0	1	S	0	2	T	0	4	
332	U 0 3 1	10	T	S	0	1	S	0	2	T	0	4	
333	U 0 3 2	10	T	S	0	1	S	0	2	T	0	4	
334	U 0 3 3	10	T	S	0	1	S	0	2	T	0	4	
335	U 0 3 4	10	T	S	0	1	S	0	2	T	0	4	



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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
				(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))	
336	U 0 3 5	10	T	S	0	1	S	0	2	T	0	4	
337	U 0 3 6	10	T	S	0	1	S	0	2	T	0	4	
338	U 0 3 7	10	T	S	0	1	S	0	2	T	0	4	
339	U 0 3 8	10	T	S	0	1	S	0	2	T	0	4	
340	U 0 3 9	10	T	S	0	1	S	0	2	T	0	4	
341	U 0 4 1	10	T	S	0	1	S	0	2	T	0	4	
342	U 0 4 2	10	T	S	0	1	S	0	2	T	0	4	
343	U 0 4 3	10	T	S	0	1	S	0	2	T	0	4	
344	U 0 4 4	10	T	S	0	1	S	0	2	T	0	4	
345	U 0 4 5	10	T	S	0	1	S	0	2	T	0	4	
346	U 0 4 6	10	T	S	0	1	S	0	2	T	0	4	
347	U 0 4 7	10	T	S	0	1	S	0	2	T	0	4	
348	U 0 4 8	10	T	S	0	1	S	0	2	T	0	4	
349	U 0 4 9	10	T	S	0	1	S	0	2	T	0	4	
350	U 0 5 0	10	T	S	0	1	S	0	2	T	0	4	
351	U 0 5 1	10	T	S	0	1	S	0	2	T	0	4	
352	U 0 5 2	10	T	S	0	1	S	0	2	T	0	4	
353	U 0 5 3	10	T	S	0	1	S	0	2	T	0	4	
354	U 0 5 5	10	T	S	0	1	S	0	2	T	0	4	
355	U 0 5 6	10	T	S	0	1	S	0	2	T	0	4	
356	U 0 5 7	10	T	S	0	1	S	0	2	T	0	4	
357	U 0 5 8	10	T	S	0	1	S	0	2	T	0	4	
358	U 0 5 9	10	T	S	0	1	S	0	2	T	0	4	
359	U 0 6 0	10	T	S	0	1	S	0	2	T	0	4	
360	U 0 6 1	10	T	S	0	1	S	0	2	T	0	4	
361	U 0 6 2	10	T	S	0	1	S	0	2	T	0	4	
362	U 0 6 3	10	T	S	0	1	S	0	2	T	0	4	
363	U 0 6 4	10	T	S	0	1	S	0	2	T	0	4	
364	U 0 6 6	10	T	S	0	1	S	0	2	T	0	4	
365	U 0 6 7	10	T	S	0	1	S	0	2	T	0	4	
366	U 0 6 8	10	T	S	0	1	S	0	2	T	0	4	
367	U 0 6 9	10	T	S	0	1	S	0	2	T	0	4	
368	U 0 7 0	10	T	S	0	1	S	0	2	T	0	4	



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XIV. Description of Hazardous Wastes (Continued)															
Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES								
							(1) PROCESS CODES (Enter code)				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))				
369	U	0	7	1	10	T	S	0	1	S	0	2	T	0	4
370	U	0	7	2	10	T	S	0	1	S	0	2	T	0	4
371	U	0	7	3	10	T	S	0	1	S	0	2	T	0	4
372	U	0	7	4	10	T	S	0	1	S	0	2	T	0	4
373	U	0	7	5	10	T	S	0	1	S	0	2	T	0	4
374	U	0	7	6	10	T	S	0	1	S	0	2	T	0	4
375	U	0	7	7	10	T	S	0	1	S	0	2	T	0	4
376	U	0	7	8	10	T	S	0	1	S	0	2	T	0	4
377	U	0	7	9	10	T	S	0	1	S	0	2	T	0	4
378	U	0	8	0	10	T	S	0	1	S	0	2	T	0	4
379	U	0	8	1	10	T	S	0	1	S	0	2	T	0	4
380	U	0	8	2	10	T	S	0	1	S	0	2	T	0	4
381	U	0	8	3	10	T	S	0	1	S	0	2	T	0	4
382	U	0	8	4	10	T	S	0	1	S	0	2	T	0	4
383	U	0	8	5	10	T	S	0	1	S	0	2	T	0	4
384	U	0	8	6	10	T	S	0	1	S	0	2	T	0	4
385	U	0	8	7	10	T	S	0	1	S	0	2	T	0	4
386	U	0	8	8	10	T	S	0	1	S	0	2	T	0	4
387	U	0	8	9	10	T	S	0	1	S	0	2	T	0	4
388	U	0	9	0	10	T	S	0	1	S	0	2	T	0	4
389	U	0	9	1	10	T	S	0	1	S	0	2	T	0	4
390	U	0	9	2	10	T	S	0	1	S	0	2	T	0	4
391	U	0	9	3	10	T	S	0	1	S	0	2	T	0	4
392	U	0	9	4	10	T	S	0	1	S	0	2	T	0	4
393	U	0	9	5	10	T	S	0	1	S	0	2	T	0	4
394	U	0	9	6	10	T	S	0	1	S	0	2	T	0	4
395	U	0	9	7	10	T	S	0	1	S	0	2	T	0	4
396	U	0	9	8	10	T	S	0	1	S	0	2	T	0	4
397	U	0	9	9	10	T	S	0	1	S	0	2	T	0	4
398	U	1	0	1	10	T	S	0	1	S	0	2	T	0	4
399	U	1	0	2	10	T	S	0	1	S	0	2	T	0	4
400	U	1	0	3	10	T	S	0	1	S	0	2	T	0	4
401	U	1	0	5	10	T	S	0	1	S	0	2	T	0	4

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
				(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))			
402	U 1 0 6	10	T	S	0	1	S	0	2	T	0	4			
403	U 1 0 7	10	T	S	0	1	S	0	2	T	0	4			
404	U 1 0 8	10	T	S	0	1	S	0	2	T	0	4			
405	U 1 0 9	10	T	S	0	1	S	0	2	T	0	4			
406	U 1 1 0	10	T	S	0	1	S	0	2	T	0	4			
407	U 1 1 1	10	T	S	0	1	S	0	2	T	0	4			
408	U 1 1 2	10	T	S	0	1	S	0	2	T	0	4			
409	U 1 1 3	10	T	S	0	1	S	0	2	T	0	4			
410	U 1 1 4	10	T	S	0	1	S	0	2	T	0	4			
411	U 1 1 5	10	T	S	0	1	S	0	2	T	0	4			
412	U 1 1 6	10	T	S	0	1	S	0	2	T	0	4			
413	U 1 1 7	10	T	S	0	1	S	0	2	T	0	4			
414	U 1 1 8	10	T	S	0	1	S	0	2	T	0	4			
415	U 1 1 9	10	T	S	0	1	S	0	2	T	0	4			
416	U 1 2 0	10	T	S	0	1	S	0	2	T	0	4			
417	U 1 2 1	10	T	S	0	1	S	0	2	T	0	4			
418	U 1 2 2	10	T	S	0	1	S	0	2	T	0	4			
419	U 1 2 3	10	T	S	0	1	S	0	2	T	0	4			
420	U 1 2 4	10	T	S	0	1	S	0	2	T	0	4			
421	U 1 2 5	10	T	S	0	1	S	0	2	T	0	4			
422	U 1 2 6	10	T	S	0	1	S	0	2	T	0	4			
423	U 1 2 7	10	T	S	0	1	S	0	2	T	0	4			
424	U 1 2 8	10	T	S	0	1	S	0	2	T	0	4			
425	U 1 2 9	10	T	S	0	1	S	0	2	T	0	4			
426	U 1 3 0	10	T	S	0	1	S	0	2	T	0	4			
427	U 1 3 1	10	T	S	0	1	S	0	2	T	0	4			
428	U 1 3 2	10	T	S	0	1	S	0	2	T	0	4			
429	U 1 3 3	10	T	S	0	1	S	0	2	T	0	4			
430	U 1 3 4	10	T	S	0	1	S	0	2	T	0	4			
431	U 1 3 5	10	T	S	0	1	S	0	2	T	0	4			
432	U 1 3 6	10	T	S	0	1	S	0	2	T	0	4			
433	U 1 3 7	10	T	S	0	1	S	0	2	T	0	4			
434	U 1 3 8	10	T	S	0	1	S	0	2	T	0	4			

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES													(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
							(1) PROCESS CODES (Enter code)													
435	U	1	4	0	10	T	S	0	1	S	0	2	T	0	4					
436	U	1	4	1	10	T	S	0	1	S	0	2	T	0	4					
437	U	1	4	2	10	T	S	0	1	S	0	2	T	0	4					
438	U	1	4	3	10	T	S	0	1	S	0	2	T	0	4					
439	U	1	4	4	10	T	S	0	1	S	0	2	T	0	4					
440	U	1	4	5	10	T	S	0	1	S	0	2	T	0	4					
441	U	1	4	6	10	T	S	0	1	S	0	2	T	0	4					
442	U	1	4	7	10	T	S	0	1	S	0	2	T	0	4					
443	U	1	4	8	10	T	S	0	1	S	0	2	T	0	4					
444	U	1	4	9	10	T	S	0	1	S	0	2	T	0	4					
445	U	1	5	0	10	T	S	0	1	S	0	2	T	0	4					
446	U	1	5	1	10	T	S	0	1	S	0	2	T	0	4					
447	U	1	5	2	10	T	S	0	1	S	0	2	T	0	4					
448	U	1	5	3	10	T	S	0	1	S	0	2	T	0	4					
449	U	1	5	4	10	T	S	0	1	S	0	2	T	0	4					
450	U	1	5	5	10	T	S	0	1	S	0	2	T	0	4					
451	U	1	5	6	10	T	S	0	1	S	0	2	T	0	4					
452	U	1	5	7	10	T	S	0	1	S	0	2	T	0	4					
453	U	1	5	8	10	T	S	0	1	S	0	2	T	0	4					
454	U	1	5	9	10	T	S	0	1	S	0	2	T	0	4					
455	U	1	6	0	10	T	S	0	1	S	0	2	T	0	4					
456	U	1	6	1	10	T	S	0	1	S	0	2	T	0	4					
457	U	1	6	2	10	T	S	0	1	S	0	2	T	0	4					
458	U	1	6	3	10	T	S	0	1	S	0	2	T	0	4					
459	U	1	6	4	10	T	S	0	1	S	0	2	T	0	4					
460	U	1	6	5	10	T	S	0	1	S	0	2	T	0	4					
461	U	1	6	6	10	T	S	0	1	S	0	2	T	0	4					
462	U	1	6	7	10	T	S	0	1	S	0	2	T	0	4					
463	U	1	6	8	10	T	S	0	1	S	0	2	T	0	4					
464	U	1	6	9	10	T	S	0	1	S	0	2	T	0	4					
465	U	1	7	0	10	T	S	0	1	S	0	2	T	0	4					
466	U	1	7	1	10	T	S	0	1	S	0	2	T	0	4					
467	U	1	7	2	10	T	S	0	1	S	0	2	T	0	4					

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
				(1) PROCESS CODES (Enter code)				(2) PROCESS DESCRIPTION (If a code is not entered in D(1))					
468	U 1 7 3	10	T	S	0	1	S	0	2	T	0	4	
469	U 1 7 4	10	T	S	0	1	S	0	2	T	0	4	
470	U 1 7 6	10	T	S	0	1	S	0	2	T	0	4	
471	U 1 7 7	10	T	S	0	1	S	0	2	T	0	4	
472	U 1 7 8	10	T	S	0	1	S	0	2	T	0	4	
473	U 1 7 9	10	T	S	0	1	S	0	2	T	0	4	
474	U 1 8 0	10	T	S	0	1	S	0	2	T	0	4	
475	U 1 8 1	10	T	S	0	1	S	0	2	T	0	4	
476	U 1 8 2	10	T	S	0	1	S	0	2	T	0	4	
477	U 1 8 3	10	T	S	0	1	S	0	2	T	0	4	
478	U 1 8 4	10	T	S	0	1	S	0	2	T	0	4	
479	U 1 8 5	10	T	S	0	1	S	0	2	T	0	4	
480	U 1 8 6	10	T	S	0	1	S	0	2	T	0	4	
481	U 1 8 7	10	T	S	0	1	S	0	2	T	0	4	
482	U 1 8 8	10	T	S	0	1	S	0	2	T	0	4	
483	U 1 8 9	10	T	S	0	1	S	0	2	T	0	4	
484	U 1 9 0	10	T	S	0	1	S	0	2	T	0	4	
485	U 1 9 1	10	T	S	0	1	S	0	2	T	0	4	
486	U 1 9 2	10	T	S	0	1	S	0	2	T	0	4	
487	U 1 9 3	10	T	S	0	1	S	0	2	T	0	4	
488	U 1 9 4	10	T	S	0	1	S	0	2	T	0	4	
489	U 1 9 6	10	T	S	0	1	S	0	2	T	0	4	
490	U 1 9 7	10	T	S	0	1	S	0	2	T	0	4	
491	U 2 0 0	10	T	S	0	1	S	0	2	T	0	4	
492	U 2 0 1	10	T	S	0	1	S	0	2	T	0	4	
493	U 2 0 2	10	T	S	0	1	S	0	2	T	0	4	
494	U 2 0 3	10	T	S	0	1	S	0	2	T	0	4	
495	U 2 0 4	10	T	S	0	1	S	0	2	T	0	4	
496	U 2 0 5	10	T	S	0	1	S	0	2	T	0	4	
497	U 2 0 6	10	T	S	0	1	S	0	2	T	0	4	
498	U 2 0 7	10	T	S	0	1	S	0	2	T	0	4	
499	U 2 0 8	10	T	S	0	1	S	0	2	T	0	4	
500	U 2 0 9	10	T	S	0	1	S	0	2	T	0	4	

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## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES													
							(1) PROCESS CODES (Enter code)													
								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))												
501	U	2	1	0	10	T	S	0	1	S	0	2	T	0	4					
502	U	2	1	1	10	T	S	0	1	S	0	2	T	0	4					
503	U	2	1	3	10	T	S	0	1	S	0	2	T	0	4					
504	U	2	1	4	10	T	S	0	1	S	0	2	T	0	4					
505	U	2	1	5	10	T	S	0	1	S	0	2	T	0	4					
506	U	2	1	6	10	T	S	0	1	S	0	2	T	0	4					
507	U	2	1	7	10	T	S	0	1	S	0	2	T	0	4					
508	U	2	1	8	10	T	S	0	1	S	0	2	T	0	4					
509	U	2	1	9	10	T	S	0	1	S	0	2	T	0	4					
510	U	2	2	0	10	T	S	0	1	S	0	2	T	0	4					
511	U	2	2	1	10	T	S	0	1	S	0	2	T	0	4					
512	U	2	2	2	10	T	S	0	1	S	0	2	T	0	4					
513	U	2	2	3	10	T	S	0	1	S	0	2	T	0	4					
514	U	2	2	5	10	T	S	0	1	S	0	2	T	0	4					
515	U	2	2	6	10	T	S	0	1	S	0	2	T	0	4					
516	U	2	2	7	10	T	S	0	1	S	0	2	T	0	4					
517	U	2	2	8	10	T	S	0	1	S	0	2	T	0	4					
518	U	2	3	4	10	T	S	0	1	S	0	2	T	0	4					
519	U	2	3	5	10	T	S	0	1	S	0	2	T	0	4					
520	U	2	3	6	10	T	S	0	1	S	0	2	T	0	4					
521	U	2	3	7	10	T	S	0	1	S	0	2	T	0	4					
522	U	2	3	8	10	T	S	0	1	S	0	2	T	0	4					
523	U	2	3	9	10	T	S	0	1	S	0	2	T	0	4					
524	U	2	4	0	10	T	S	0	1	S	0	2	T	0	4					
525	U	2	4	3	10	T	S	0	1	S	0	2	T	0	4					
526	U	2	4	4	10	T	S	0	1	S	0	2	T	0	4					
527	U	2	4	6	10	T	S	0	1	S	0	2	T	0	4					
528	U	2	4	7	10	T	S	0	1	S	0	2	T	0	4					
529	U	2	4	8	10	T	S	0	1	S	0	2	T	0	4					
530	U	2	4	9	10	T	S	0	1	S	0	2	T	0	4					
531	U	2	7	1	10	T	S	0	1	S	0	2	T	0	4					
532	U	2	7	7	10	T	S	0	1	S	0	2	T	0	4					
533	U	2	7	8	10	T	S	0	1	S	0	2	T	0	4					

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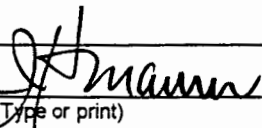
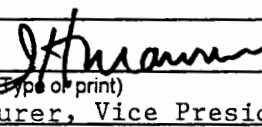
## XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))
							(1) PROCESS CODES (Enter code)								
534	U	2	7	9	10	T	S	0	1	S	0	2	T	0	4
535	U	2	8	0	10	T	S	0	1	S	0	2	T	0	4
536	U	3	2	8	10	T	S	0	1	S	0	2	T	0	4
537	U	3	5	3	10	T	S	0	1	S	0	2	T	0	4
538	U	3	5	9	10	T	S	0	1	S	0	2	T	0	4
539	U	3	6	4	10	T	S	0	1	S	0	2	T	0	4
540	U	3	6	5	10	T	S	0	1	S	0	2	T	0	4
541	U	3	6	6	10	T	S	0	1	S	0	2	T	0	4
542	U	3	6	7	10	T	S	0	1	S	0	2	T	0	4
543	U	3	7	2	10	T	S	0	1	S	0	2	T	0	4
544	U	3	7	3	10	T	S	0	1	S	0	2	T	0	4
545	U	3	7	5	10	T	S	0	1	S	0	2	T	0	4
546	U	3	7	6	10	T	S	0	1	S	0	2	T	0	4
547	U	3	7	7	10	T	S	0	1	S	0	2	T	0	4
548	U	3	7	8	10	T	S	0	1	S	0	2	T	0	4
549	U	3	7	9	10	T	S	0	1	S	0	2	T	0	4
550	U	3	8	1	10	T	S	0	1	S	0	2	T	0	4
551	U	3	8	2	10	T	S	0	1	S	0	2	T	0	4
552	U	3	8	3	10	T	S	0	1	S	0	2	T	0	4
553	U	3	8	4	10	T	S	0	1	S	0	2	T	0	4
554	U	3	8	5	10	T	S	0	1	S	0	2	T	0	4
555	U	3	8	6	10	T	S	0	1	S	0	2	T	0	4
556	U	3	8	7	10	T	S	0	1	S	0	2	T	0	4
557	U	3	8	9	10	T	S	0	1	S	0	2	T	0	4
558	U	3	9	0	10	T	S	0	1	S	0	2	T	0	4
559	U	3	9	1	10	T	S	0	1	S	0	2	T	0	4
560	U	3	9	2	10	T	S	0	1	S	0	2	T	0	4
561	U	3	9	3	10	T	S	0	1	S	0	2	T	0	4
562	U	3	9	4	10	T	S	0	1	S	0	2	T	0	4
563	U	3	9	5	10	T	S	0	1	S	0	2	T	0	4
564	U	3	9	6	10	T	S	0	1	S	0	2	T	0	4
565	U	4	0	0	10	T	S	0	1	S	0	2	T	0	4
566	U	4	0	1	10	T	S	0	1	S	0	2	T	0	4

STF ENV580F.6



Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

<b>EPA I.D. Number (Enter from page 1)</b> <div style="border: 1px solid black; padding: 2px; min-height: 20px;">PAD000736942</div>	<b>Secondary ID Number (Enter from page 1)</b> <div style="border: 1px solid black; padding: 2px; min-height: 20px;">NA</div>
<b>XV. Map</b>	
<p><i>Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.</i></p>	
<b>XVI. Facility Drawing</b>	
<p><i>All existing facilities must include a scale drawing of the facility (see instructions for more detail).</i></p>	
<b>XVII. Photographs</b>	
<p><i>All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).</i></p>	
<b>XVIII. Certification(s)</b>	
<p><i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></p>	
Owner Signature 	Date Signed <div style="border: 1px solid black; padding: 2px;">4/21/97</div>
Name and Official Title (Type or print) Jonathan H. Maurer, Vice President	
Owner Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature 	Date Signed <div style="border: 1px solid black; padding: 2px;">4/21/97</div>
Name and Official Title (Type or print) Jonathan H. Maurer, Vice President	
Operator Signature	Date Signed
Name and Official Title (Type or print)	
<b>XIX. Comments</b>	
<p><b>Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)</b></p>	



B. FACILITY DESCRIPTION

B-1 General Description

The Neville Island Plant of Calgon Carbon Corporation is located on the southeast corner of Neville Island, directly to the east of the Fleming Park Bridge. The street address is:

Calgon Carbon Corporation  
200 Neville Road  
Neville Township, Allegheny County, Pennsylvania

The mailing address is:

Calgon Carbon Corporation  
Neville Island  
Pittsburgh, PA 15225

The Neville Island plant contains three separate production operations: carbon reactivation, carbon impregnation and drying, and carbon pelletizing. The impregnation and drying facility exposes virgin grade carbon to aqueous solutions of selected inorganic compounds or elements in order to place these materials within the pores of the carbon to establish desired product characteristics. The reactivation facility receives, stores, and reactivates spent carbon (thermal treatment) as described below. The Hazardous and Residual Waste Management (HRWM) facility for storage of spent carbon is part of the reactivation facility.

Calgon Carbon Corporation receives and regenerates (for reuse) granular activated carbon which has been utilized by various client companies, primarily in the chemical process industry. This carbon has been utilized to adsorb organic chemicals in water, wastewater, and process applications. Some of the client companies utilize the carbon in the treatment of hazardous wastes, resulting in the spent, or used carbon to be classified as a hazardous waste. The majority of the client companies, however, utilize the carbon in non-hazardous activities; therefore, most of the spent carbon handled at the Neville Island

B. FACILITY DESCRIPTION

B-1 General Description (continued)

facility is non-hazardous and classified as residual waste. More detailed information on the characteristics of the spent carbon is provided under Section C: Waste Characteristics.

The spent granular activated carbon is received and temporarily stored prior to being thermally regenerated for reuse in the carbon reactivation unit in one of four tanks, T-401 and T-403, each having a capacity of 20,565 gallons, and T-402 and T-404, which have a capacity of 30,000 gallons each. Spent carbon may also be received and temporarily stored in approved small containers.

Although the carbon is usually in storage for 4 to 7 days prior to regeneration, a reactivation unit outage or other extended shutdown may require extended storage (in excess of 90 days) of the spent carbon at this facility.

The contact responsible for the hazardous and residual waste management activities at Calgon Carbon Corporation's Neville Island facility is:

Mr. S. J. Kreminski  
Plant Manager

Plant phone: (412) 771-4050

B. FACILITY DESCRIPTION

B-2 Topographic Map

Exhibit B-1 (Drawing 09-01-0041) is a topographic map showing the facility boundaries, waste management structures, buildings, surface water, surrounding areas, and other details. Exhibit B-2 (Drawing 09-01-0042) is a plant plot plan showing facility details not shown on the topographic map.

The scale for the topographic map is 1 inch = 200 feet with a contour interval of 5 feet. The map covers all areas up to 1,450 feet (1/4 mile) from the HRWM facility. The plant plan has a scale of 1" = 30 feet and does not have contours.

The 100-year floodplain area is shown on Exhibit B-1 to be all areas up to el. 723. The HRWM facility is not within the 100-year floodplain. The source of this floodplain information and evaluation of the facility is discussed in Section B-3.

Exhibit B-1 shows the surrounding land use area. The area north of the plant, surrounding area on Neville Island, is all industrial usage. Residential areas are located on the opposite bank of the Ohio River (back channel).

The prevailing wind speed is 8.3 mph and is directed from 260 degrees as shown on Exhibit B-1. This information was provided by the NOAA weather station at the Pittsburgh International Airport, located 8 miles west of the facility, and based upon 1981 observations.

Exhibit B-1 shows the legal boundaries of the land owned by Calgon Carbon Corporation. The plant plan, Exhibit B-2, shows these boundaries more precisely.

B. FACILITY DESCRIPTION

B-2 Topographic Map (continued)

The Neville Island facility withdraws water from wells for process use at the plant as shown on Exhibit B-2, while West View Water Authority withdraws water from wells in the surrounding area as shown on Exhibit B-1. There are no injection wells at the facility.

Exhibit B-1 shows the plant facilities, along with the hazardous and residual waste management units, in minor detail. Exhibit B-2 shows the facilities in more detail, including security features (described in Section F); buildings; containment structures (described in Section F); and operational units.

B-3 Location Information

B-3a Seismic Standard

The Calgon Carbon facility is located in Allegheny County, Pennsylvania. As this county is not listed in Appendix VI of Part 264, this section does not apply.

B-3b 100-Year Floodplain Standard

The HRWM facility is not located inside the 100-year floodplain. As no FIA map was available for this location, this information was obtained from the U.S. Army Corps of Engineers. Discussion with the Pittsburgh District Engineer established the 100-year floodplain level at 723 feet elevation at the facility location (5 to 5.25 mile point of the Ohio River). This information was obtained from the U.S. Army Corp of Engineers Ohio River Frequency Profile.

As shown on the plan drawings for the HRWM facility (Exhibit F-4), the tank farm

B. FACILITY DESCRIPTION

B-3 Location Information

B-3a Seismic Standard (continued)

containment area is enclosed by a curb wall at 732'8" which is well above the 100-year floodplain elevation. No further analysis on flood contingency is presented.

B-4 Traffic Information

The reactivation facility receives four (average) to eight (maximum) daily deliveries of spent granular activated carbon. The spent carbon is received in dump trailers, enclosed trailers, or in small containers. The dump trailers contain 35,000 to 40,000 pounds of spent carbon, are tarpaulin-covered to prevent spillage, and are unloaded into the unloading sump as described in Section F-4. The enclosed trailers, illustrated in Exhibit F-3, contain 20,000 pounds of spent carbon and are delivered to the HRWM facility as shown on Exhibit B-6. The trailers are transported by standard 3-axle diesel tractors capable of handling the maximum over-the-road weight (80,000 pounds) of full loads. Small containers typically hold 200 to 3,000 pounds of carbon (dry basis) and are unloaded manually.

The traffic pattern and control described herein is further illustrated on the area maps, Exhibit B-1 and B-2. The delivery trucks arrive at the plant via Neville Road. The majority of the trucks will exit from Interstate 79 at the Neville Island Exit, turning west (right) at Grand Avenue, and turning right on Neville Road, proceeding west into the plant. At the access road for Calgon Carbon Corporation and adjoining plants, Neville Road is provided with a traffic light and two lanes to allow for a safe left turn. Truck traffic may also arrive via Route 51, entering Neville Road from the Fleming Park Bridge requiring a right turn to the plant access road. Trucks will then be backed into the

B. FACILITY DESCRIPTION

B-4 Traffic Information (continued)

HRWM facility tank storage area through the truck gate. The truck gate is maintained as noted in Section F - Security. The truck is then spotted for convenient transfer of spent granular carbon to the storage tanks. There is no traffic control device at the plant truck gate, but personnel are on duty to assist the incoming truck and driver.

The public roads and access roads are all capable of maintaining heavy traffic. Neville Road, and the plant access road, being located in a highly industrial area, are capable of sustaining heavy truck traffic: 80,000-pound over-the-road weight per Pennsylvania regulation. The HRWM facility is a paved concrete surface to handle truck traffic and to contain spent carbon and contaminated water as per Section F-4. Typical plant concrete paving specifications (Exhibit B-3) show that the area surfacing and bearing capacity is sufficient for frequent use by heavy trucks.



**Operational Concept Report  
Spent Granular Activated Carbon Storage  
Calgon Carbon Corporation  
Neville Island**

A. Facility Description

The Neville Island Plant of Calgon Carbon Corporation is located on the southeast corner of Neville Island, directly to the east of the Fleming Park Bridge. The street address is:

Calgon Carbon Corporation  
200 Neville Road  
Neville Township, Allegheny County, Pennsylvania

The mailing address is:

Calgon Carbon Corporation  
Neville Island  
Pittsburgh, PA 15225

The Neville Island plant contains three separate production operations: carbon reactivation, carbon impregnation and drying, and carbon pelletizing. The impregnation and drying facility exposes virgin grade carbon to aqueous solutions of selected inorganic compounds or elements in order to place these materials within the carbon's pores to establish desired product characteristics. The reactivation facility receives, stores, and reactivates spent carbon (thermal treatment) as described below. The Hazardous and Residual Waste Management (HRWM) facility for storage of spent carbon is part of the reactivation facility.

Calgon Carbon Corporation receives and regenerates (for reuse) granular activated carbon which has been utilized by various client companies, primarily in the chemical process industry. This carbon has been utilized to adsorb organic chemicals in water, wastewater, and process applications. Some of these companies utilize the carbon in the treatment of



A. Facility Description (continued)

hazardous waste, resulting in the spent, or used carbon to be classified as a hazardous waste. The majority of the client companies, however, utilize the carbon in non-hazardous activities; therefore, most of the spent carbon handled at the Neville Island facility is non-hazardous and classified as residual waste. More detailed information on the characteristics of the spent carbon is provided under Section C: Waste Characteristics.

The spent granular activated carbon is received and temporarily stored prior to being thermally regenerated for reuse in the carbon reactivation unit in one of four tanks, T-401 and T-403, each having a capacity of 20,565 gallons, and T-402 and T-404, which have a capacity of 30,000 gallons each. Spent carbon may also be received and temporarily stored in small containers.

The carbon is usually in storage for 4 to 7 days prior to regeneration, but a reactivation unit outage or other extended shutdown may require extended storage (in excess of 90 days) of the spent carbon at this facility.

Calgon Carbon Corporation submitted a Hazardous Waste Permit Application - Part A for the carbon storage facility to the U.S. Environmental Protection Agency on November 17, 1980, and amended on August 24 1991. The facility was assigned the ID Number PAD 000736942.

B. Waste Type, Sources and Volumes

The hazardous and residual wastes stored at this facility consist of spent activated carbon which as been used in industrial or municipal wastewater treatment applications, industrial

B. Waste Type, Sources and Volumes (continued)

vapor-phase waste treatment applications, food grade manufacturing applications, and potable water purification. Calgon Carbon Corporation has confidentiality agreements with all industrial customers whose waste is being treated; therefore, customer names have been omitted from the permit application.

Spent carbons listed as hazardous are so classified by Calgon Carbon Corporation's clients, as the carbon may be utilized in hazardous waste treatment service. Prior to contracting with Calgon Carbon for spent carbon regeneration, the customers advise Calgon Carbon whether their waste stream is regulated under RCRA guidelines and for which listed contaminants.

All incoming carbons are stored in the same facility as spent carbon inventory. The maximum amount of spent carbon on-site at any given time is 418,000 pounds (capacity of storage tanks and small containers). The annual quantities of the various RCRA (hazardous) carbons handled are provided in the Part A application.

C. Storage Facility Description

The spent granular carbon received as hazardous or residual waste at Calgon Carbon Corporation's Neville Island facility may be stored in one of four tanks or in small containers as defined in Section D-3. These tanks are identified on the Piping and instrument Diagram (Exhibit D-1) and Area Plan (Exhibit D-2 or B-2) as Spent Carbon (storage) Tanks and labeled T-401, T-402, T-403, and T-404.

Two of the spent carbon tanks are 30,000-gallon FRP tanks designed to contain 100,000

C. Storage Facility Description (continued)

pounds of spent granular carbon. The other two storage tanks are 20,565-gallon FRP tanks which have a design capacity of 80,000 pounds of spent carbon each. FRP was selected as a construction material due to its good corrosion resistance to the wide range of organic and inorganic contaminants expected from industrial waste treatment service. This material is discussed in more detail in Section D of the permit application.

The tanks are vented through a carbon adsorber and operated at atmospheric pressure to prevent over pressurization.

The tanks are to temporarily store the spent carbon prior to the regeneration process. In case of regeneration process shutdowns, outage, or possible "campaign" usage, the storage tanks may be required to store the spent carbon for extended periods (in excess of 90 days). In normal operation the entire storage facility capacity of 418,000 pounds of spent carbon provides a five-day supply for the regeneration facility. The storage facility is also managed to minimize the retention time of spent carbon in the storage tanks.

The design of the storage tanks is presented in more detail in Section D of the permit application.

The tanks are located in a totally paved and diked containment area. This area is designed to conform with regulatory requirements for the containment of tank volume and rainfall. The unloading area to the north of the tanks is also paved, curbed, and sloped to contain all spills. Water generated through the containment of spills, leaks, and precipitation is collected in the contaminated water system at the storage facility and disposed of properly. The dikes and curbing at the storage site also serve to prevent surface water infiltration.

C. Storage Facility Description (continued)

This containment area is presented in more detail in Section F of the permit application.

The HRWM facility is surrounded by a 6-foot high chain link fence for security purposes. Further security is also provided by Calgon Carbon Corporation employees, present at the plant 24 hours/7 days per week.

D. Thermal Treatment Description

For reactivation/regeneration, spent carbon slurry is pumped from the storage tanks to a 11,500-gallon surge tank. After passing through a dewatering screw, the spent activated carbon is fed to the top hearth (#1) of a multiple hearth furnace. The carbon is then carried down through a succession of seven (7) hearths by means of a rotating center shaft, to which there is attached at each hearth, a series of "rabble arms" which move the carbon alternately toward the outer edge of a hearth where it falls by gravity to the hearth below. The carbon is then rabbled to the inside edge of that hearth where it falls to the next hearth, and so on. The discharge from hearth #7 falls through a chute into the quench tank to be cooled with clean water. The natural gas-fired furnace, having controlled firing on hearths 3, 5, and 7, provides increasingly hotter zones through which the carbon must pass. The optimal operating temperature is approximately 1850 °F with a residence time of 1.5 to 2 hours.

The furnace reactivates the spent carbon by volatilizing and destroying the adsorbed contaminants. Dry, reactivated carbon is produced at a rate of 100,000 pounds per day, or 14, 892 tons per year. Reactivated carbon exiting the furnace is typically slurried with clean water in a quench tank prior to being pumped to one of four 30,500-gallon storage

D. Thermal Treatment Description (continued)

tanks. Clean water is then used to transfer carbon from the storage tanks to the trailers for transport to customer sites. Alternatively, reactivated carbon exiting the furnace may be cooled using a cooling screw and transferred as a dry product.

E. Daily Operational Methodology

The spent granular carbon is received at the site in enclosed trailers, or small containers especially designed and modified for use in this service. If the carbon has been in hazardous waste service, a manifest accompanies the delivery and the shipment is properly logged.

Prior to receiving the carbon, the yard person at the storage facility conducts monitoring of the four spent carbon storage tanks. As the carbon is delivered, the foreman and yard person know which tanks are able to receive the delivery.

The trailer containing the spent carbon is spotted on the paved unloading area at the facility. The trailer is connected to the transfer pump with hoses, and the spent carbon is transferred to the selected storage tanks as a water slurry in a totally enclosed system. This transfer procedure is discussed in more detail in Section F of the application. The yard person will also transfer the spent carbon from storage to the regeneration unit. The transfer lines for this transfer are permanent pipelines and the operator needs only to valve in the proper tank to the transfer pump to effect the transfer.

On a daily basis, the yard person at the storage facility will conduct monitoring as noted above for inventory control. This daily monitoring also includes an inspection of the tanks

E. Daily Operational Methodology (continued)

and the containment area. Small containers are inspected on a weekly schedule. This inspection is to assess the condition of all equipment, prevent leaks, and maintain all equipment in good working order.

Although transfers are effected in an enclosed system, all personnel involved in the handling and transfer of spent carbon are supplied with protective equipment, i.e. safety glasses, hats, impervious footgear, and gloves, to further minimize exposure to the spent carbon.

F. Procedures

Calgon Carbon Corporation has instituted formal procedures other than those mentioned above in order to reduce hazards at the storage and reactivation facility.

Employees involved in the operation of the facility, i.e. yard persons and foremen, undergo a training program to totally instruct them in the normal operation, emergency procedures and safety aspects of the facility.

This training involves making such employees familiar with the PPC (Preparedness, Prevention and Contingency) Plan and emergency procedures which were prepared for the site. These procedures are fully presented in Section G of the permit application.

The Neville Island plant also has prepared a closure plan as presented in Section I of the permit application to allow for safe and total removal of all spent carbon from the site. Liability insurance for the site is maintained as presented in Section I of the application.

29388

**WAP-App. B**  
**Waste Listing**

## WASTE ANALYSIS PLAN

### Characterization of Spent Carbon as Hazardous or Residual Waste

(Revised April 1997)

Changes to this Waste Analysis Plan are subject to a permit modification. This includes, but is not limited to, the addition of new waste types, differences in testing procedures, and any modifications to the Module No. 1 form. The Department shall be notified of the intent to modify, change, delete, or amend any part of this Waste Analysis Plan.

#### 1. Facility Description

Calgon Carbon Corporation (CCC) has operated a storage facility for spent activated carbon in conjunction with an activated carbon regeneration (reactivation) plant on Neville Island since the early 1970's. Carbon regeneration is a thermal treatment process in which adsorbed chemical constituents are removed from spent activated carbon to produce a recycled, reactivated product for beneficial reuse by Calgon Carbon Corporation's customers.

In addition to the regeneration process, Calgon Carbon has produced a variety of virgin activated carbons since the early 1940's. The plant is located on the southeast section of Neville Island facing the Back Channel of the Ohio River. The Neville Island plant operates 24 hours/day for 365 days per year. Although most of the carbon received at the Neville Island site is classified as non-hazardous or residual waste, a portion of the carbon received is characterized as RCRA-hazardous. All hazardous spent carbon is returned in either enclosed trailers, Calgon Carbon Service Units, or other approved small containers as identified by Section D-3, "Storage and Management of Containers".

At the plant, spent carbons characterized as hazardous or residual wastes are transferred to one of four Fiberglass Reinforced Polyester (FRP) storage tanks in a water slurry form using either compressed air, centrifugal pumps, eductors, or a combination of the respective equipment. These tanks hold the spent activated carbon until regeneration. Typical spent activated carbon loads returned for regeneration are composed of approximately 50% activated carbon, 40% entrained moisture, and 10% organic adsorbate. The most highly loaded spent carbons contain about 15% adsorbate. The organic adsorbate on a hazardous spent carbon will be described by the appropriate hazardous waste codes as listed in Appendix B. The addition of any new waste(s) shall require a permit modification.

Activated carbon has been used at Calgon's customer facilities to treat both liquid and vapor streams in a variety of applications including sugar decolorizing, drinking water treatment, water dechlorination, beverage manufacturing, various process purifications, solvent recovery, VOC control, groundwater treatment and wastewater treatment. In use, the activated carbon removes dilute concentrations (mg/L or ug/L) of organic compounds from the liquid and



vapor streams to a point where the stream is suitable for reuse or discharge. Organic compounds are concentrated on the internal pore surfaces of the activated carbon by physical attractive forces called Van der Waals forces. The organic adsorbate content of the spent activated carbon loads is limited by the adsorption capacity of the activated carbon. Adsorption capacity is a function of the Van der Waals forces and pore volume for coal based activated carbons. Restrictions are imposed upon spent activated carbon returns to ensure that no handling, storage, or regeneration problems will occur. Although highly soluble inorganic compounds are not normally removed from waste streams by adsorption on the activated carbon and should not be present in the returned material, certain constituents for particular types of spent carbon may be analyzed if requested by the Department or required through this Waste Analysis Plan. An example is reactive cyanide and sulfide testing of the spent carbon or other constituents as requested by the Department. Further restrictions and limitations are detailed in subsequent sections of this waste analysis plan.

Analysis for hazardous characteristics of spent carbons centers around the identification of the organic compounds adsorbed on the activated carbon. The balance of the material returned for processing should consist of activated carbon and water and, therefore, should not be hazardous. Analysis of an organic profile is conducted by utilizing EPA SW-846 and Department approved methods. However, for certain well-defined applications, such as gas station remediation projects, dry cleaning applications, or tank venting of a defined chemical, no organic profile determination is deemed necessary. Individual spent activated carbon loads are inspected to detect the presence of any sludge, precipitate, free organic, or other foreign materials in the spent activated carbon.

## 2. Identification of Wastes to be Managed.

### a. EPA Waste Codes/Descriptions.

The acceptance of spent activated carbons for storage and regeneration at the Neville Island facility shall be based on proper compliance with Calgon Carbon acceptance criteria as well as Federal and State regulations governing hazardous and/or residual wastes. Manifested spent activated carbons with adsorbed organic contaminants that may be returned to Calgon Carbon Corporation are found in a list contained in Appendix B of this Waste Analysis Plan. Calgon Carbon will not accept spent carbons containing polychlorinated biphenyls (PCB's) at levels greater than 50 mg/kg; spent carbon containing dioxins at levels greater than 20 ug/kg 2,3,7,8-TCDD; and 1,2-dibromo-3-chloropropane (DBCP) at levels greater than 1.5% by weight. Additional spent carbons unsuitable for regeneration include ignitables (EPA waste code D001), corrosive carbons with a pH less than 2 and greater than 12.5 (EPA waste code D002), and spent carbons characterized as reactive (EPA waste code D003). Reactive cyanide and sulfide levels will be below 250 mg/kg and 500 mg/kg, respectively, on the spent carbon.

### b. Physical/Chemical Properties.

Calgon Carbon has developed a series of evaluations for spent carbons to be characterized as either hazardous or residual wastes, encompassing both physical and chemical parameters, to ensure that the facility can properly reactivate and store the material. The process commences when the customer submits an Adsorbate Profile Document (APD - Appendix D) which details the chemical and physical properties of the spent carbon based on either their knowledge of the process or supporting analytical data. The APD will detail the nature of the adsorbed contaminants as well as any applicable EPA Hazardous Waste codes. Included is a certification as to the completeness and accuracy of the information which is signed by the customer. A sample is also submitted in conjunction with the APD so any safety concerns or handling precautions may be taken during the preacceptance testing procedure. Once the testing has been satisfactorily completed, the results of the preacceptance tests and the APD are reviewed by the Calgon Carbon Acceptance Committee which is comprised of representatives from the manufacturing, sales, environmental and health and safety divisions. The information is also reviewed by Calgon Carbon Corporation technical staff for potential problems in adsorption, handling of spent carbons and regeneration efficiencies. Once a decision has been made that the carbon will be acceptable for regeneration, the customer is notified and shipments may commence. This process is detailed in Appendix C: "Carbon Acceptance Process/Facility Receipt Flow Diagram".

The spent carbon sample submitted to Calgon Carbon Corporation will undergo several preacceptance tests to determine the suitability of the spent carbon for regeneration prior to the first return of a load. The tests include ignitability, pH, apparent density, and a small-scale laboratory regeneration (Appendices H-K, respectively). Additionally, a loading calculation will be performed using the equation found in Appendix F of this Waste Analysis Plan. Once it is determined that the spent carbon is within Calgon Carbon's guidelines for physical parameters, it is accepted. Recharacterization of the waste stream will be done if the customer changes the waste stream. The procedure to be followed for recharacterization is identified in Section 6.c.

c. Ignitability, Reactivity, Incompatibility.

Ignitable, reactive and corrosive wastes will not be acceptable for storage. Due to the nature of physical adsorption, the organic adsorbate is tightly held to the internal surfaces of the activated carbon particles and are not available for chemical interactions in storage. Because of this physical adsorption mechanism of organic compounds on the spent activated carbon, no occurrences of incompatibility has ever been experienced nor is any expected.

3. Process Tolerance Limits.

Calgon Carbon Corporation has several limitations as to the type of spent carbons that may be acceptable for regeneration. Before any spent carbon is received from a customer, that customer must obtain prior approval from Calgon Carbon Corporation's Carbon Acceptance Committee. The approval is based on reviewing the chemical and physical properties of the

spent carbon for the application, as was previously outlined in Section 2b.

Calgon Carbon shall not receive spent activated carbons characterized as ignitable, corrosive, or reactive. Based on these limitations, Calgon shall reject any spent carbons that fail any of the following tests: RTM-10 ignitable screening test, pH for spent carbons less than 2 or greater than 12.5, reactive cyanide or sulfide greater than 250 mg/kg and 500 mg/kg, respectively. Also restricted are spent carbons containing 2,3,7,8-TCDD (dioxin) measured above 20 ug/kg, polychlorinated biphenyls greater than 50 mg/kg, or 1,2-dibromo-3-chloropropane greater than 1.5 percent by weight. The generator is responsible for either testing the waste or providing a certification as to the absence of these specifically named compounds.

All spent carbon to be returned as a hazardous or residual waste must have the free water drained at the customer site. A typical return will consist of 50% carbon, 40% moisture and 10% adsorbates. If during the screening procedure the load is found to be inconsistent with normal returns, the load will be reevaluated by the plant technical staff. (See Section 5.b.1).

With the exceptions given above and those outlined in Section 2.a., Calgon Carbon shall not limit or restrict the specific adsorbates on the spent carbon. The pre-approval characterization and the screening criteria will be used for this purpose.

4. Waste Characterization and Fingerprinting.

a. Preacceptance Testing.

The following tests will be performed by Calgon Carbon Corporation prior to the initial return of spent carbons. The applicability of specific test procedures is dependent upon the initial characterization of the carbon as provided by the generator on the APD.

TESTING PARAMETER	RCRA (HAZARDOUS)	RESIDUAL (NON-HAZARDOUS)
RCRA Ignitability	•	•
pH	•	
Apparent Density	•	•
Total Halides	•	•
Total Sulfur	•	•
Small-scale Laboratory Reactivation	Case-by-case basis.	Case-by-case basis.
Loading Calculation	•	
Physical Characterization	•	

Based on the results obtained from these tests, as well as a review of the information supplied on the APD, it will be determined if the spent carbon is suitable for regeneration. The test methods and list of analytical parameters used to perform the preacceptance tests are found in Appendix E: Analytical Parameters and Relevance of Procedures.

b. Facility Screening Procedure.

All hazardous and residual waste shipments to be received at Calgon Carbon Corporation shall be subject to screening tests of the incoming waste. The form entitled "Carbon Acceptance Screening Analysis", as shown in Appendix L, is used in conjunction with the screening criteria for hazardous shipments. The terminology apparent density and dry apparent density refer to the testing procedures as described in Appendix J.

1. Visual Inspection.

A visual inspection will be conducted on each incoming shipment of carbon characterized as hazardous or residual waste. The purpose of the inspection is to identify grossly-contaminated spent carbon which has the potential to pose operational problems. If the waste is found to be untypical of spent carbon returns, the inconsistencies will be noted on the Screening Analysis Form. The Form will further identify each sample as "Acceptable" or "Requires further review". A decision will then be made by plant management as to whether the spent carbon poses any difficulties in the regeneration process. If potential difficulties are expected, the generator will be contacted in an attempt for resolution. Spent carbon that is deemed

unsuitable for regeneration will be held in an appropriate designated area of the facility, and returned to the generator within (5) working days.

2. Determination of pH.

The pH of carbons characterized as hazardous shall be analyzed in accordance to the procedure described in Appendix I. If the pH of the spent carbon is less than 2 or greater than 12.5 the waste will not be stored at Calgon Carbon Corporation. Spent carbon that is deemed unsuitable for regeneration will be held in an appropriate designated area of the facility, and returned to the generator within (5) working days.

3. Determination of Apparent Density.

The apparent density shall be analyzed on carbons characterized as hazardous as prescribed by the procedure outlined in Appendix J. If the apparent density is greater than 0.900 g/mL the waste will not be acceptable for storage, and will be returned to the generator within (5) working days.

4. Ignitability.

The RCRA Ignitability of carbons characterized as hazardous will be conducted using Calgon Carbon Method RTM-10 (Appendix H). If the waste should fail the ignitability test, then the waste shall be rejected, held in an appropriate designated area of the facility and returned to the generator within five (5) working days.

If the shipment satisfies the criterion outlined above, it will be scheduled for unloading. If a waste stream is rejected based on the aforementioned criteria, Calgon Carbon shall not remove the waste from the container and will return the waste to the generator within five (5) working days.

c. Waste Recharacterization (hazardous only).

In most cases, activated carbon is used in processes where waste streams do not change. The spent carbon returns from such an application are consistent in their physical and chemical properties. Because of this consistency, recharacterization will be required only when the waste stream generation process is changed by the customer. For spent carbons initially characterized as hazardous, the customer shall be required to provide an annual certification that no changes have occurred in the waste generation process. The certification form is found in Appendix N.

5. Sampling (hazardous only).

All carbon received must be either dry or "drained" as specified in the process limitations. Where applicable, shipments will be sampled by personnel trained in accordance with this section and the Sampling Procedures in Appendix M.

a. Sampling Method.

Typically, a grab sample of the carbon is obtained from a bottom discharge opening on a vessel or container when feasible. Since spent activated carbon drained of free liquid may still contain up to 50 percent moisture, however, the carbon may not be free-flowing. In these instances, a grab sample will be obtained from the top of the vessel or container.

b. Bulk Trailers.

In the field application, activated carbon is utilized in columns operated to achieve exhaustion of all the carbon in the adsorption vessel. During the transfer to the bulk trailer, the spent carbon is subject to a degree of mixing which will generally produce a homogeneous load. Sampling plans have been developed based on this observation. Each bulk shipment of spent carbon returned to Calgon Carbon will be sampled from the rear or center manway of the trailer. A grab sample will be taken at a depth of six to twelve inches into the load. The sample will be immediately transferred to a bottle, labeled with the customer's name, date, time, trailer and unit number, and signature of person sampling, and delivered to the plant foreperson. (Reference sampling procedure - Appendix M).

c. Calgon Carbon Service Units.

Calgon Carbon Service Units and small containers less than 5,000 pounds will be sampled from the bottom valve or opening when feasible. Units are designed for either liquid or air purification applications. Some service units are primarily for the return of spent carbon from adsorption systems, while others are actual adsorption vessels themselves. When multiple service units or small containers are returned together from the same site, the number of units to be sampled will be determined in accordance with Appendix M.

d. Facility Sample Receipt and Log-In Procedure.

Once the foreperson receives the sample, it will be checked to confirm that the label is properly completed with the customer's name, trailer/unit number, date, time, and sampler's initials. The foreperson will then sign the screening sheet. The foreperson will visually inspect the sample, make any comments on the screening sheet per the Visual Inspection method outlined in Section 5.b.1, and submit the sample to the laboratory once all the initial visual screening conditions have been satisfied. The sample will be entered into the log book

which includes a record of the customer name, carbon acceptance number, date, manifest number, and screening test results.

e. Dirty Water Characterization

On an annual basis, the dirty water generated by unloading the drained carbon from either trailers or small containers will be characterized for flashpoint. Since the dirty water is characterized annually for waste disposal, with flashpoint being a parameter, the analytical results will also serve to meet this requirement.

6. Quality Assurance/Quality Control (QA/QC).

The analysis of the spent carbon for the organic and inorganic constituents may be performed by a laboratory adhering to the QA/QC practices outlined below as chosen mutually by the generator and Calgon Carbon Corporation. However, the calculation of the carbon loading may only be performed by Calgon Carbon Corporation utilizing the methods and procedures described herein. Any laboratory performing the tests and procedures on the spent carbon whether it is Calgon Carbon Corporation or an outside laboratory shall adhere to similar requirements for QA/QC and the methods as described herein. These laboratories shall abide by common quality assurance/quality control practices as stated in EPA-SW-846 and any additional QA/QC procedures that are referenced in individual test methods.

a. Designation of Quality Assurance/Quality Control (QA/QC) Officer.

(Note: Although the terminology is stated as a QA/QC Officer, the job duties may be performed by more than one individual).

Calgon Carbon Corporation shall designate a person(s) to act as a QA/QC Officer. This person shall have a rudimentary knowledge of sampling procedures, applicable Federal and State regulations, and analytical methodology. The duties of the officer shall include but not necessarily be limited to: review of all incoming manifests and associated paperwork, review of all sampling and testing procedures used for waste characterization, screening tests, and process checks; review of all chemical data from a generator's laboratory as well as from Calgon Carbon Corporation, including methods of QA/QC employed.

b. Use of Outside Laboratories.

Chemical characterizations which may be required for the spent activated carbon may be performed by the generator, by Calgon Carbon Corporation or by a laboratory designated by the generator or by Calgon Carbon Corporation.

All testing must be performed using applicable EPA test procedures and protocols. The laboratory which provides the chemical characterization of the spent activated carbon must

adhere to common quality assurance/quality control practices in order that the data produces will be of known and defensible quality. To ensure data quality, the designated laboratory shall follow the operating principles and guidelines described in the Handbook for Analytical Quality Control in Water and Wastewater Laboratories (EPA 600/4-79-019, March 1979), EPA Test Methods for Evaluating Solid Waste (SW-846-Third Edition, November 1986), and any additional guidelines indicated on individual test methods.

c. Chain of Custody.

After the spent carbon sample has been collected in the field and prior to its submittal to Calgon Carbon Corporation, a chain of custody form is prepared to accompany the samples from time of collection to completion of final report issuance. Each sample within a packing container is recorded on a chain of custody form. Each sample and number of containers shipped is recorded on the sheet. All information regarding the project is recorded, i.e., type of sample, analysis required, specialty marks, etc. The original custody sheet is placed outside the package and the package is sealed. An outside tape corresponding to the inside custody sheet is placed on the outside of the container so that the package cannot be opened without breaking the tape. Upon receipt of the package, any damage to the seal is noted. If no tampering is observed, note is also taken. The package is opened with contents verified against the chain of custody form. If all is correct then the form is signed, dated and locked with the corresponding sample until analysis. If any tampering is observed or there is a deviation from this chain of custody procedure, the samples will not be accepted for analysis by the laboratory and new samples shall be collected for analysis. An example of the chain of custody form is shown in Appendix O and the outside tape depicted in Appendix P.

With respect to the sample received at the facility for regular screening purposes, the "Carbon Acceptance Screening Analysis" Form found in Appendix L also serves as the chain of custody form which is maintained in the files for the lifetime of the facility. The form details the customer, date, transporter, and person receiving at the facility. Additionally, the sample container is complete with a label which corresponds to the same information provided on the screening form.

d. Recordkeeping.

In order to ensure compliance with both Federal and State regulations, each shipment of manifested (hazardous) spent carbon will be checked for the following items by trained Calgon Carbon staff:

1. Manifest Document Number
2. Generator's name, address, telephone number, and USEPA Identification Number
3. Designated facility's name, address, and USEPA Identification Number
4. State Transportation Identification Number
5. Department of Transportation proper shipping name



6. Quantity/Volume of the waste
7. Number and type of containers in the shipment
8. EPA waste codes
9. Generator signature and date
10. Transporter signature and date
11. Land Disposal Restriction Notification form.

If any of these items are found to missing or in error, the load will not be accepted for storage until the correct information is supplied by an authorized representative of the customer.

e. Sample Receipt and Log-in Procedure.

(Note: Laboratories other than Calgon Carbon Corporation may not utilize exactly the same receiving and logging procedures as described herein. However, these procedures shall be investigated by the QA/QC officer to insure that they are acceptable and meet the requirements for general QA/QC practices.)

All samples are logged into a computerized sample management system along with pertinent information (e.g., client name, account number, sample description, analysis required plus any special instructions regarding each particular sample). Necessary storage conditions are assigned. All information regarding holding time, date to be completed, applicable method, disposal instructions are noted. During analysis all raw data is recorded in bound notebooks in ink. After analysis is complete a report is generated with all pertinent information.

f. Module No. 1 Application Requirements (hazardous only).

After Calgon Carbon Corporation has approved a characteristic or listed hazardous waste stream for regeneration from a particular generator for the first time, they shall submit to the Department a Module No. 1 form with generator certification as shown in Appendix Q. Additionally, attached to the Module No. 1 will be an Adsorbate Profile Document as detailed in Section 2.b.

g. Notification of Waste Activity (residual only).

After Calgon Carbon Corporation has approved a residual carbon waste stream for regeneration for the initial time, a letter of notification with an attached Adsorbate Profile Document will be submitted to the Department.

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